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**REMARKS**

In the Non-Final Office Action, Examiner Munoz rejected pending claims 1-13, 15, 17-20, 22, 24-30 and 32 on various grounds. The Applicant responds to each rejection as subsequently recited herein, and respectfully requests reconsideration and further examination of the present application:

- A. Examiner Munoz rejected pending claims 1, 6, 8 and 12 under 35 U.S.C. §102(e) as being anticipated by U.S. Patent Application Publication No. US 2004/0190638 A1 to *Blasco Claret et al.*

The Applicant has thoroughly considered Examiner Munoz's remarks concerning the patentability of claims 1, 6, 8 and 12 over *Blasco Claret*. The Applicant has also thoroughly read *Blasco Claret*. To warrant this 102(e) rejection of claims 1, 6, 8 and 12, *Blasco Claret* must show each and every limitation of independent claims 1 and 8 in as complete detail as is contained in independent claims 1 and 8. See, MPEP §2131. The Applicant respectfully traverses this 102(e) rejection of claims 1, 6, 8 and 12, because *Blasco Claret* fails to teach or suggest an "ensemble correlation function" as recited in independent claims 1 and 8.

As to the traversal, the Applicant has defined the new and unique term "ensemble correlation function" as a function that is obtained by combining consecutive correlation values over a window smaller than the length of a cyclic extension, and by combining correlation values for identical sample positions over an ensemble of OFDM symbols. See, *U.S. Patent Application Serial No. 09/919,050* at page 4, lines 7-17. An exemplary illustration of such an ensemble correlation function is illustrated in FIG. 3 of the present application.

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A careful review of *Blasco Claret* reveals the failure of *Blasco Claret* to teach or suggest an ensemble correlation function as defined by the Applicant. Specifically, in view of the fact that the operating principle of *Blasco Claret* requires a transmission of two identical synchronization signals, the teachings of *Blasco Claret* at best can be described as a "non-ensemble correction function" that is no more cumulative than the prior art illustrated in FIG. 2 of the present application. Moreover, an incorporation of an ensemble correlation function as defined by the Applicant within *Blasco Claret*, if such a correlation was possible, would render *Blasco Claret* inoperable for its intended purpose.

Withdrawal of the rejection of independent claims 1 and 8 under 35 U.S.C. §102(e) as being anticipated by *Blasco Claret* is therefore respectfully requested.

Claim 6 depends from independent claim 1. Therefore, dependent claim 6 includes all of the elements of independent claim 1. It is therefore respectfully submitted by the Applicant that dependent claim 6 is allowable over *Blasco Claret* for at least the same reasons as set forth herein with respect to independent claim 1 being allowable over *Blasco Claret*. Therefore, withdrawal of the rejection of dependent claim 6 under 35 U.S.C. §102(e) as being anticipated by *Blasco Claret* is therefore respectfully requested.

Claim 12 depends from independent claim 8. Therefore, dependent claim 12 includes all of the elements of independent claim 8. It is therefore respectfully submitted by the Applicant that dependent claim 12 is allowable over *Blasco Claret* for at least the same reasons as set forth herein with respect to independent claim 8 being allowable over *Blasco Claret*. Therefore, withdrawal of the rejection of dependent claim 12 under 35 U.S.C. §102(e) as being anticipated by *Blasco Claret* is therefore respectfully requested.

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- B. Examiner Munoz rejected pending claims 15, 17-19, 22 and 24-30 under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,219,334 B1 to *Sato et al.*

The Applicant has thoroughly considered Examiner Munoz's remarks concerning the patentability of claims 15, 17-19, 22 and 24-30 over *Sato*. The Applicant has also thoroughly read *Sato*. To warrant this 102(e) rejection of claims 15, 17-19, 22 and 24-30, *Sato* must show each and every limitation of independent claims 15, 22 and 28 in as complete detail as is contained in independent claims 15, 22 and 28. See, MPEP §2131. The Applicant respectfully traverses this 102(e) rejection of claims 15, 17-19, 22 and 24-30, because *Sato* fails to teach or suggest an "ensemble correlation function" as recited in independent claims 15, 22 and 28.

As to the traversal, the Applicant has defined the new and unique term "ensemble correlation function" as a function that is obtained by combining consecutive correlation values over a window smaller than the length of a cyclic extension, and by combining correlation values for identical sample positions over an ensemble of OFDM symbols. See, *U.S. Patent Application Serial No. 09/919,050* at page 4, lines 7-17. An exemplary illustration of such an ensemble correlation function is illustrated in FIG. 3 of the present application.

A careful review of *Sato* reveals the failure of *Sato* to teach or suggest an ensemble correlation function as defined by the Applicant. Specifically, in view of the fact that the operating principle of *Sato* requires a transmission of delay time estimation symbols, the teachings of *Sato* at best can be described as a "non-ensemble correlation function" that is no more cumulative than the prior art illustrated in FIG. 2 of the present application. Moreover, an incorporation of an ensemble correlation function as defined by the Applicant within *Sato*, if such a correlation was possible, would render *Sato* inoperable for its intended purpose.

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Withdrawal of the rejection of independent claims 15, 22 and 28 under 35 U.S.C. §102(e) as being anticipated by *Sato* is therefore respectfully requested.

Claims 17-19 from independent claim 15. Therefore, dependent claims 17-19 include all of the elements of independent claim 15. It is therefore respectfully submitted by the Applicant that dependent claims 17-19 are allowable over *Sato* for at least the same reasons as set forth herein with respect to independent claim 15 being allowable over *Sato*. Therefore, withdrawal of the rejection of dependent claims 17-19 under 35 U.S.C. §102(e) as being anticipated by *Sato* is therefore respectfully requested.

Claims 24-27 from independent claim 22. Therefore, dependent claims 24-27 include all of the elements of independent claim 22. It is therefore respectfully submitted by the Applicant that dependent claims 24-27 are allowable over *Sato* for at least the same reasons as set forth herein with respect to independent claim 22 being allowable over *Sato*. Therefore, withdrawal of the rejection of dependent claims 24-27 under 35 U.S.C. §102(e) as being anticipated by *Sato* is therefore respectfully requested.

Claims 29 and 30 from independent claim 28. Therefore, dependent claims 29 and 30 include all of the elements of independent claim 28. It is therefore respectfully submitted by the Applicant that dependent claims 29 and 30 are allowable over *Sato* for at least the same reasons as set forth herein with respect to independent claim 28 being allowable over *Sato*. Therefore, withdrawal of the rejection of dependent claims 29 and 30 under 35 U.S.C. §102(e) as being anticipated by *Sato* is therefore respectfully requested.

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- C. Examiner Munoz rejected pending claims 2, 7 and 11 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent Application Publication No. US 2004/0190638 A1 to *Blasco Claret et al.* in view of U.S. Patent No. 6,711,123 to *Taira*

Claims 2 and 7 depend from independent claim 1. Therefore, dependent claims 2 and 7 include all of the elements of independent claim 1. It is therefore respectfully submitted by the Applicant that dependent claims 2 and 7 are allowable over *Blasco Claret* in view of *Taira* for at least the same reasons as set forth with respect to independent claim 1 being allowable over *Blasco Claret*. Therefore, withdrawal of the rejection of dependent claims 2 and 7 under 35 U.S.C. §103(a) as being unpatentable over *Blasco Claret* in view of *Taira* is respectfully requested.

Claim 11 depends from independent claim 8. Therefore, dependent claim 11 includes all of the elements of independent claim 8. It is therefore respectfully submitted by the Applicant that dependent claim 11 is allowable over *Blasco Claret* in view of *Taira* for at least the same reasons as set forth with respect to independent claim 8 being allowable over *Blasco Claret*. Therefore, withdrawal of the rejection of dependent claim 11 under 35 U.S.C. §103(a) as being unpatentable over *Blasco Claret* in view of *Taira* is respectfully requested.

- D. Examiner Munoz rejected pending claims 3-5, 9, 10 and 13 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent Application Publication No. US 2004/0190638 A1 to *Blasco Claret et al.*

Claims 3-5 depend from independent claim 1. Therefore, dependent claims 3-5 include all of the elements of independent claim 1. It is therefore respectfully submitted by the Applicant that dependent claims 3-5 are allowable over *Blasco Claret* in view of *Taira* for at least the same reasons as set forth with respect to independent claim 1 being allowable over *Blasco Claret*. Therefore, withdrawal of the rejection of dependent claims 3-5 under 35 U.S.C. §103(a) as being unpatentable over *Blasco Claret* in view of *Taira* is respectfully requested.

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Claims 9, 10 and 13 depend from independent claim 8. Therefore, dependent claims 9, 10 and 13 include all of the elements of independent claim 8. It is therefore respectfully submitted by the Applicant that dependent claims 9, 10 and 13 are allowable over *Blasco Claret* for at least the same reasons as set forth with respect to independent claim 8 being allowable over *Blasco Claret*. Therefore, withdrawal of the rejection of dependent claims 9, 10 and 13 under 35 U.S.C. §103(a) as being unpatentable over *Blasco Claret* in view of *Taira* is respectfully requested.

- E. Examiner Munoz rejected pending claims 20 and 32 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,219,334 B1 to *Sato et al.* in view of U.S. Patent No. 6,711,123 to *Taira*

Claim 20 depends from independent claim 15. Therefore, dependent claim 20 includes all of the elements of independent claim 15. It is therefore respectfully submitted by the Applicant that dependent claim 20 is allowable over *Sato* in view of *Taira* for at least the same reasons as set forth with respect to independent claim 15 being allowable over *Sato*. Therefore, withdrawal of the rejection of dependent claim 20 under 35 U.S.C. §103(a) as being unpatentable over *Sato* in view of *Taira* is respectfully requested.

Claim 32 depends from independent claim 28. Therefore, dependent claim 32 includes all of the elements of independent claim 28. It is therefore respectfully submitted by the Applicant that dependent claim 32 is allowable over *Sato* in view of *Taira* for at least the same reasons as set forth with respect to independent claim 28 being allowable over *Sato*. Therefore, withdrawal of the rejection of dependent claim 32 under 35 U.S.C. §103(a) as being unpatentable over *Sato* in view of *Taira* is respectfully requested.

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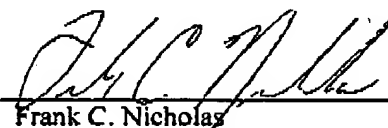
**SUMMARY**

The Applicant respectfully submits that pending claims 1-32 as listed herein fully satisfy the requirements of 35 U.S.C. §§ 102, 103 and 112. In view of the foregoing, favorable consideration and early passage to issue of the present application is respectfully requested. If any points remain in issue that may best be resolved through a personal or telephonic interview, Examiner Munoz is respectfully requested to contact the undersigned at the telephone number listed below.

Dated: March 30, 2005

Respectfully submitted,  
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